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GTCAATATGCTGTTCAAGTCATGGCAACTGGCAGCAGCCTCCGGGCTCCTGTCTGGAGTC MetLeuPheLysSerTrpGlnLeuAlaAlaAlaSerGlyLeuLeuSerGlyVa	60 18
CTCGGCATCCCGATGGACACCGGCAGCCACCCCATTGAGGCTGTTGATCCCGAAGTGAAG lleuGlyIleProMetAspThrGlySerHisProIleGluAlaValAspProGluValLy	120 38
ACTGAGGTCTTCGCTGACTCCCTCCTTGCTGCAGCAGGCGATGACGACTGGGAGTCACCT sThrGluValPheAlaAspSerLeuLeuAlaAlaAlaGlyAspAspAspTrpGluSerPr	180 58
CCATACAACTTGCTTTACAGGAATGCCCTGCCAATTCCACCTGTCAAGCAGCCCAAGATG	240
oProTyrAsnLeuLeuTyrArgAsnAlaLeuProIleProProValLysGlnProLysMe	78
ATCATTACCAACCCTGTCACCGGCAAGGACATTTGGTACTATGAGATCGAGATCAAGCCA	300
tllelleThrAsnProValThrGlyLysAspIleTrpTyrTyrGluIleGluIleLysPr	98
TTTCAGCAAAGGATTTACCCCACCTTGCGCCCTGCCACTCTCGTCGGCTACGATGGCATG oPheGlnGlnArgIleTyrProThrLeuArgProAlaThrLeuValGlyTyrAspGlyMe	360 118
AGCCCTGGTCCTACTTTCAATGTTCCCAGAGGAACAGAGACTGTAGTTAGGTTCATCAAC	420
tSerProGlyProThrPheAsnValProArgGlyThrGluThrValValArgPheIleAs	138
AATGCCACCGTGGAGAACTCGGTCCATCTGCACGGCTCCCCATCGCGTGCCCCTTTCGAT	480
nAsnAlaThrValGluAsnSerValHisLeuHisGlySerProSerArgAlaProPheAs	158
GGTTGGGCTGAAGATGTGACCTTCCCTGGCGAGTACAAGGATTACTACTTTCCCAACTAC	540
pGlyTrpAlaGluAspValThrPheProGlyGluTyrLysAspTyrTyrPheProAsnTy	178
CAATCCGCCCGCCTTCTGTGGTACCATGACCACGCTTTCATGAAGACTGCTGAGAATGCC	600
rGlnSerAlaArgLeuLeuTrpTyrHisAspHisAlaPheMetLysThrAlaGluAsnAl	198
PACTTTGGTCAGGCTGGCGCCTACATTATCAACGACGAGGCTGAGGATGCTCTCGGTCTT	660
aTyrPheGlyGlnAlaGlyAlaTyrIleIleAsnAspGluAlaGluAspAlaLeuGlyLe	218
CCTAGTGGCTATGGCGAGTTCGATATCCCTCTGATCCTGACGGCCAAGTACTATAACGCC	720
uProSerGlyTyrGlyGluPheAspIleProLeuIleLeuThrAlaLysTyrTyrAsnAl	238
GATGGTACCCTGCGTTCGACCGAGGGTGAGGACCAGGACCTGTGGGGAGATGTCATCCAT	780
aAspGlyThrLeuArgSerThrGluGlyGluAspGlnAspLeuTrpGlyAspValIleHi	258
GTCAACGGACAGCCATGGCCTTTCCTTAACGTCCAGCCCCGCAAGTACCGTTTCCGATTC	840
sValAsnGlyGlnProTrpProPheLeuAsnValGlnProArgLysTyrArgPheArgPh	278
CTCAACGCTGCCGTGTCTCGTGCTTGGCTCCTCTACCTCGTCAGGACCAGCTCTCCCAAC	900
eLeuAsnAlaAlaValSerArgAlaTrpLeuLeuTyrLeuValArgThrSerSerProAs	298
GTCAGAATTCCTTTCCAAGTCATTGCCTCTGATGCTGGTCTCCTTCAAGCCCCCGTTCAG	960
nValArgIleProPheGlnValIleAlaSerAspAlaGlyLeuLeuGlnAlaProValGl	318
ACCTCTAACCTCTACCTTGCTGTTGCCGAGCGTTACGAGATCATTATTGACTTCACCAAC	1020
nThrSerAsnLeuTyrLeuAlaValAlaGluArgTyrGluIleIleIleAspPheThrAs	338
TTTGCTGGCCAGACTCTTGACCTGCGCAACGTTGCTGAGACCAACGATGTCGGCGACGAG	1080
nPheAlaGlyGlnThrLeuAspLeuArgAsnValAlaGluThrAsnAspValGlyAspGl	358
GATGAGTACGCTCGCACTCTCGAGGTGATGCGCTTCGTCGTCAGCTCTGGCACTGTTGAG	1140
uAspGluTyrAlaArgThrLeuGluValMetArgPheValValSerSerGlyThrValGl	378

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GACAACAGCCAGGTCCCCTCCACTCTCCGTGACGTTCCTTTCCCTCCTCACAAGGAAGG	1200 398
CCCGCCGACAAGCACTTCAAGTTTGAACGCAGCAACGGACACTACCTGATCAACGATGTT yProAlaAspLysHisPheLysPheGluArgSerAsnGlyHisTyrLeuIleAsnAspVa	1260 418
GGCTTTGCCGATGTCAATGAGCGTGTCCTGGCCAAGCCCGAGCTCGGCACCGTTGAGGTC 1GlyPheAlaAspValAsnGluArgValLeuAlaLysProGluLeuGlyThrValGluVa	1320 438
TGGGAGCTCGAGAACTCCTCTGGAGGCTGGAGCCACCCCGTCCACATTCACCTTGTTGAC lTrpGluLeuGluAsnSerSerGlyGlyTrpSerHisProValHisIleHisLeuValAs	1380 458
TTCAAGATCCTCAAGCGAACTGGTGGTCGTGGCCAGGTCATGCCCTACGAGTCTGCTGGT pPheLysIleLeuLysArgThrGlyGlyArgGlyGlnValMetProTyrGluSerAlaGl	1440 478
CTTAAGGATGTCGTCTGGTTGGGCAGGGGTGAGACCCTGACCATCGAGGCCCACTACCAA yLeuLysAspValValTrpLeuGlyArgGlyGluThrLeuThrIleGluAlaHisTyrGl	1500 498
CCCTGGACTGGAGCTTACATGTGGCACTGTCACAACCTCATTCACGAGGATAACGACATG nProTrpThrGlyAlaTyrMetTrpHisCysHisAsnLeuIleHisGluAspAsnAspMe	1560 518
ATGGCTGTATTCAACGTCACCGCCATGGAGGAGAAGGGATATCTTCAGGAGGACTTCGAG tMetAlaValPheAsnValThrAlaMetGluGluLysGlyTyrLeuGlnGluAspPheGl	1620 538
GACCCCATGAACCCCAAGTGGCGCGCCGTTCCTTACAACCGCAACGACTTCCATGCTCGC uAspProMetAsnProLysTrpArgAlaValProTyrAsnArgAsnAspPheHisAlaAr	1680 558
GCTGGAAACTTCTCCGCCGAGTCCATCACTGCCCGAGTGCAGGAGCTGGCCGAGCAGGAG gAlaGlyAsnPheSerAlaGluSerIleThrAlaArgValGlnGluLeuAlaGluGlnGl	1740 578
CCGTACAACCGCCTCGATGAGATCCTGGAGGATCTTGGAATCGAGGAGTAA uProTyrAsnArgLeuAspGluIleLeuGluAspLeuGlyIleGluGlu	1791 594

FIG._1B

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				TGGCTGGGGG		60
AGTCAATATC			CTTGCTACGC	GCAAAAAGCT	CCTTGCCGAA	120
	CTATCAAGTG				ACAGTTAGGG	180
TGGTGACCTA	CTCGAAGAGG	CCCCGACTTG	CATGCATACG	ACATGTCGCT	TCCATGCAAC	240
	ACATCGGCGA				CCCCTGGTTT	300
CCTTTTGTTT	CTTTTCCTTT	CTCAACGACG	CGTGAGCGTG	GTTAACTTGA	GCAAGGCCGA	360
GTGGTCTGTT	CACGAGGTTA	CCATCGAACT	CTCTTCTTTC	CCAATCATGA	CCTGCCCCC	420
GAGTTTAGCC	CCCATCACGG	CTGTGAAATC	CACTTCGATA	ATCCTAGCCT	AGTGCTACTC	480
TTCAATAGTT	GCTCCTGATG	GGGCACTTTG	GTCACATTGC	CTTGGTTYCT	CCTACCTCGT	540
TCTCTTCCGC	ATCAAGCCTC	TATGCCCGAC	GACAACACCT	CATTGGCCCG	GACCACTTTG	600
AGCGCGCACG	CACCTTCGCG	CCGAAGGAGT	TGATAACACC	CTTCACCCTT	GCCCAATGAT	660
GGAGTTTTGG	TCTATTTGTC	ATGATCACCT	CACATTCACT	AGATCACGGA	TCCTGGAAGA	720
GGGTGTGGAA	GCCAGACCAG	CTTGTCCCTG	TTCTTGCAGA	CTCAGGTCAG	CTCCTAGCGG	780
CTATCACAGC	TCAGGATTAT	CAAGTCCCGT	AAAGTCCAGA	CCCTTTTCAT	TGTATGATGC	840
TGCCTAATTT	GCGCTATCTC	TATGCCGTAG	CAGCCGTCTT	GGCTACAACT	GGCTGCCATG	900
GCTGAAGCAT	CGTGAGATCT	ATAAAGGTCT	CCGAATCCTC	GGTGAAGTCA	GAATCGTCTC	960
TCCACACCAG	TCAACAACAA	GCTTCTTTCT	CTTACAGCTT	AGCCTGAGCA	CATTCACAGA	1020
ACTCTTCCCT	TCTTTTCGTC	AATATGCTGT	TCAAGTCATG	GCAACTGGCA	GCAGCCTCCG	1080
GGCTCCTGTC	TGGAGTCCTC	GGCATCCCGA	TGGACACCGG	CAGCCACCCC	ATTGAGGCTG	1140
TTGATCCCGA	AGTGAAGACT	GAGGTCTTCG	CTGACTCCCT	CCTTGCTGCA	GCAGGCGATG	1200
ACGACTGGGA	GTCACCTCCA	TACAACTTGC	TTTACAGGTG	AGACACCTGT	CCCACCTGTT	1260
TTCCCTCGAT	AACTAACTCT	TATAGGAATG	CCCTGCCAAT	TCCACCTGTC	AAGCAGCCCA	1320
AGATGTATGT	CTTTGATTTT	CTACGAAGCA	ACTCGGCCCC	GACTAATGTA	TTCTAGGATC	1380
ATTACCAACC	CTGTCACCGG	CAAGGACATT	TGGTACTATG	AGATCGAGAT	CAAGCCATTT	1440
CAGCAAAGGG	TGAGTTTGCT	CAGAAACCTT	GTGGTAATTA	ATCATTGTTA	CTGACCCTTT	1500
CAGATTTACC	CCACCTTGCG	CCCTGCCACT	CTCGTCGGCT	ACGATGGCAT	GAGCCCTGGT	1560
CCTACTTTCA	ATGTTCCCAG	AGGAACAGAG	ACTGTAGTTA	GGTTCATCAA	CAATGCCACC	1620
GTGGAGAACT	CGGTCCATCT	GCACGGCTCC	CCATCGCGTG	CCCCTTTCGA	TGGTTGGGCT	1680
GAAGATGTGA	CCTTCCCTGG	CGAGTACAAG	GATTACTACT	TTCCCAACTA	CCAATCCGCC	1740
CGCCTTCTGT	GGTACCATGA	CCACGCTTTC			TTTATCTTTC	1800
	TTGGCTAACC				TACTTTGGTC	1860
	CTACATTATC				CCTAGTGGCT	1920
ATGGCGAGTT	CGATATCCCT	CTGATCCTGA	CGGCCAAGTA	CTATAACGCC	GATGGTACCC	1980
TGCGTTCGAC	CGAGGGTGAG	GACCAGGACC	TGTGGGGAGA	TGTCATCCAT	GTCAACGGAC	2040
AGCCATGGCC	TTTCCTTAAC	GTCCAGCCCC	GCAAGTACCG	TTTCCGATTC	CTCAACGCTG	2100
CCGTGTCTCG	TGCTTGGCTC	CTCTACCTCG	TCAGGACCAG	CTCTCCCAAC	GTCAGAATTC	2160
CTTTCCAAGT	CATTGCCTCT	GATGCTGGTC	TCCTTCAAGC	CCCCGTTCAG	ACCTCTAACC	2220
TCTACCTTGC	TGTTGCCGAG	CGTTACGAGA	TCATTATTGG	TATGCCCTCC	CCTCTCACGA	2280
		CTAACACTTG	TAGACTTCAC	CAACTTTGCT	GGCCAGACTC	2340
TTGACCTGCG	CAACGTTGCT	GAGACCAACG	ATGTCGGCGA	CGAGGATGAG	TACGCTCGCA	2400
CTCTCGAGGT	GATGCGCTTC	GTCGTCAGCT	CTGGCACTGT	TGAGGACAAC	AGCCAGGTCC	2460
CCTCCACTCT	CCGTGACGTT	CCTTTCCCTC	CTCACAAGGA	AGGCCCCGCC	GACAAGCACT	2520
TCAAGTTTGA	ACGCAGCAAC	GGACACTACC	TGATCAACGA	TGTTGGCTTT	GCCGATGTCA	2580
ATGAGCGTGT	CCTGGCCAAG	CCCGAGCTCG	GCACCGTTGA	GGTCTGGGAG	CTCGAGAACT	2640
CCTCTGGAGG	CTGGAGCCAC	CCCGTCCACA	TTCACCTTGT	TGACTTCAAG	ATCCTCAAGC	2700
GAACTGGTGG	TCGTGGCCAG	GTCATGCCCT	ACGAGTCTGC	TGGTCTTAAG	GATGTCGTCT	2760
				CCAACCCTGG		2820
ACATGTGGCA	CTGTCACAAC	CTCATTCACG	AGGATAACGA	CATGATGGCT	GTATTCAACG	2880
TCACCGCCAT	GGAGGAGAAG	GGATATCTTC	AGGAGGACTT	CGAGGACCCC	ATGAACCCCA	2940
AGTGGCGCGC	CGTTCCTTAC	AACCGCAACG	ACTTCCATGC	TCGCGCTGGA	AACTTCTCCG	3000
CCGAGTCCAT	CACTGCCCGA	GTGCAGGAGC	TGGCCGAGCA	GGAGCCGTAC		3060
ATGAGATCCT	GGAGGATCTT	GGAATCGAGG	AGTAAACCCC	GAGCCACAAG	CTCTACAATC	3120
				TCTTCCCTAC		3180
					CTCACCACTG	
TCATTACCGC	CCACTTGTAC	CTATTCGATT	CTTGTTCAAA	CTTTTCTAGT	GCGAGAGTGT	3300
CCATAGTCAA	GAAACGCCCA	TAGGGCTATC	GTCTAAACTG	AACTATTGTG	TGGTCTGTGA	3360
				GGTATATCTT		3420
					GAGTCTAGCT	
					ACCGATGTAA	
					TTAGGTTGCA	
		CATGGGTGTT	GGGACCAAAT	CATCCATACC	TGATTTTGAT	3660
AACTGACCTG	GGTCAAT					3677

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T	MFKHTLGAAALSLLFNSNAVQA.SPVPETSPATGHLFKRV	39
1		50
40	AQISPQYPMFTVPLPIPPVKQPRLTVTNPVNGQEIWYYEVEIKPFT	85
51	GDDDWESPPYNLLYRNALPIPPVKQPKMIITNPVTGKDIWYYEIEIKPFQ	100
86	HQVYPDLGSADLVGYDGMSPGPTFQVPRGVETVVRFINNAEAPNSVHLHG	135
101	QRIYPTLRPATLVGYDGMSPGPTFNVPRGTETVVRFINNATVENSVHLHG	150
136	SFSRAAFDGWAEDITEPGSFKDYYYPNRQSARTLWYHDHAMHITAENAYR	185
151	SPSRAPFDGWAEDVTFPGEYKDYYFPNYQSARLLWYHDHAFMKTAENAYF	200
186	GQAGLYMLTDPAEDALNLPSGYGEFDIPMILTSKQYTANGNLVTTNGELN	235
201	GQAGAYIINDEAEDALGLPSGYGEFDIPLILTAKYYNADGTLRSTEGEDQ	250
236	SFWGDVIHVNGQPWPFKNVEPRKYRFRFLDAAVSRSFGLYFADTDAIDTR	285
251	DLWGDVIHVNGQPWPFLNVQPRKYRFRFLNAAVSRAWLLYLVRTSSPNVR	300
286 301	LPFKVIASDSGLLEHPADTSLLYISMAERYEVVFDFSDYAGKTIELRNLG	335 349
336	GSIGGIGTDTDYDNTDKVMRFVVADDTTQPDTSVVPANLRDVPFPSPTTN	385
350	AETNDVGDEDEYARTLEVMRFVVSSGTVE.DNSQVPSTLRDVPFPPHKEG	398
386	.TPRQFRFGRTGPTWTINGVAFADVQNRLLANVPVGTVERWELINAGNGW	434
399	PADKHFKFERSNGHYLINDVGFADVNERVLAKPELGTVEVWELENSSGGW	448
135	THPIHIHLVDFKVISRTSGNNARTVMPYES.GLKDVVWLGRRETVVVEAH	483
149	SHPVHIHLVDFKILKRTGGRGQVMPYESAGLKDVVWLGRGETLTIEAH	496
184	YAPFPGVYMFHCHNLIHEDHDMMAAFNATVLPDYGYNATVFVDPMEELWQ	533
197	YQPWIGAYMWHCHNLIHEDNDMMAVFNVTAMEEKGYLQEDFEDPMNPKWR	546
534	ARPYELGEFQAQSGQFSVQAVTERIQTMAEYRPYAAADE	572
547	AVPYNRNDFHARAGNFSAESITARVQELAEQEPYNRLDEILEDLGIEE	594

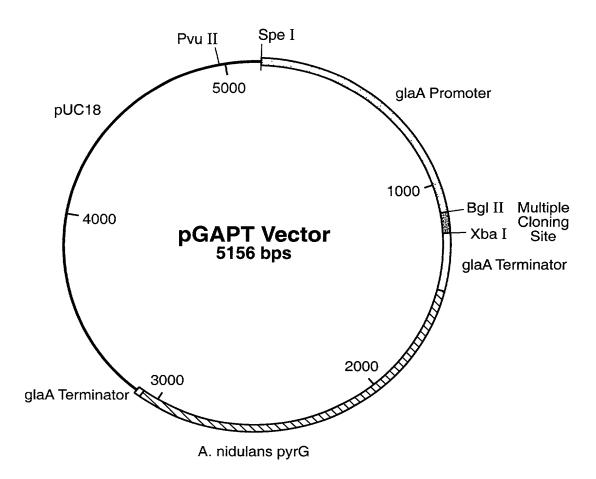


FIG._4

AGATCTAATA TGCTGTTCAA GTCATGGCAA CTGGCAGCAG CCTCCGGGCT CCTGTCTGGA 60 GTCCTCGGCA TCCCGATGGA CACCGGCAGC CACCCCATTG AGGCTGTTGA TCCCGAAGTG 120 AAGACTGAGG TCTTCGCTGA CTCCCTCCTT GCTGCAGCAG GCGATGACGA CTGGGAGTCA 180 CCTCCATACA ACTTGCTTTA CAGGTGAGAC ACCTGTCCCA CCTGTTTTCC CTCGATAACT 240 AACTCTTATA GGAATGCCCT GCCAATTCCA CCTGTCAAGC AGCCCAAGAT GTATGTCTTT 300 GATTTTCTAC GAAGCAACTC GGCCCCGACT AATGTATTCT AGGATCATTA CCAACCCTGT CACCGGCAAG GACATTTGGT ACTATGAGAT CGAGATCAAG CCATTTCAGC AAAGGGTGAG 420 TTTGCTCAGA AACCTTGTGG TAATTAATCA TTGTTACTGA CCCTTTCAGA TTTACCCCAC 480 CTTGCGCCCT GCCACTCTCG TCGGCTACGA TGGCATGAGC CCTGGTCCTA CTTTCAATGT 540 TCCCAGAGGA ACAGAGACTG TAGTTAGGTT CATCAACAAT GCCACCGTGG AGAACTCGGT 600 CCATCTGCAC GGCTCCCCAT CGCGTGCCCC TTTCGATGGT TGGGCTGAAG ATGTGACCTT 660 CCCTGGCGAG TACAAGGATT ACTACTTTCC CAACTACCAA TCCGCCCGCC TTCTGTGGTA 720 CCATGACCAC GCTTTCATGA AGGTATGCTA CGAGCCTTTA TCTTTCTTGG CTACCTTTGG 780 CTAACCAACT TCCTTTCGTA GACTGCTGAG AATGCCTACT TTGGTCAGGC TGGCGCCTAC 840 ATTATCAACG ACGAGGCTGA GGATGCTCTC GGTCTTCCTA GTGGCTATGG CGAGTTCGAT 900 ATCCCTCTGA TCCTGACGGC CAAGTACTAT AACGCCGATG GTACCCTGCG TTCGACCGAG 960 GGTGAGGACC AGGACCTGTG GGGAGATGTC ATCCATGTCA ACGGACAGCC ATGGCCTTTC 1020 CTTAACGTCC AGCCCCGCAA GTACCGTTTC CGATTCCTCA ACGCTGCCGT GTCTCGTGCT 1080 TGGCTCCTCT ACCTCGTCAG GACCAGCTCT CCCAACGTCA GAATTCCTTT CCAAGTCATT 1140 GCCTCTGATG CTGGTCTCCT TCAAGCCCCC GTTCAGACCT CTAACCTCTA CCTTGCTGTT 1200 1260 CTAAGACTAA CACTTGTAGA CTTCACCAAC TTTGCTGGCC AGACTCTTGA CCTGCGCAAC 1320 GTTGCTGAGA CCAACGATGT CGGCGACGAG GATGAGTACG CTCGCACTCT CGAGGTGATG 1380 CGCTTCGTCG TCAGCTCTGG CACTGTTGAG GACAACAGCC AGGTCCCCTC CACTCTCCGT 1440 GACGTTCCTT TCCCTCCTCA CAAGGAAGGC CCCGCCGACA AGCACTTCAA GTTTGAACGC 1500 AGCAACGGAC ACTACCTGAT CAACGATGTT GGCTTTGCCG ATGTCAATGA GCGTGTCCTG 1560 GCCAAGCCCG AGCTCGGCAC CGTTGAGGTC TGGGAGCTCG AGAACTCCTC TGGAGGCTGG 1620 AGCCACCCG TCCACATTCA CCTTGTTGAC TTCAAGATCC TCAAGCGAAC TGGTGGTCGT 1680 GGCCAGGTCA TGCCCTACGA GTCTGCTGGT CTTAAGGATG TCGTCTGGTT GGGCAGGGGT 1740 GAGACCCTGA CCATCGAGGC CCACTACCAA CCCTGGACTG GAGCTTACAT GTGGCACTGT 1800 CACAACCTCA TTCACGAGGA TAACGACATG ATGGCTGTAT TCAACGTCAC CGCCATGGAG 1860 GAGAAGGGAT ATCTTCAGGA GGACTTCGAG GACCCCATGA ACCCCAAGTG GCGCGCCGTT 1920 CCTTACAACC GCAACGACTT CCATGCTCGC GCTGGAAACT TCTCCGCCGA GTCCATCACT 1980 GCCCGAGTGC AGGAGCTGGC CGAGCAGGAG CCGTACAACC GCCTCGATGA GATCCTGGAG 2040 GATCTTGGAA TCGAGGAGTA GTCTAGA 2067

FIG._5

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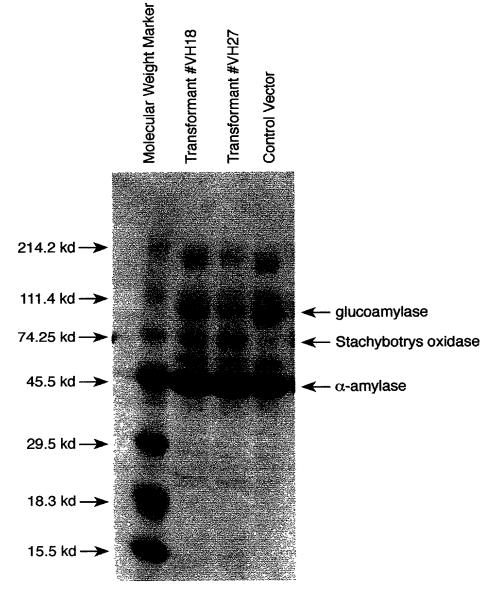


FIG._6